

### **REMARKS**

Claims 1-15 were pending. Applicants thank the Examiner for indicating that claims 6-9 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. In response, Applicants have amended independent claim 1 to include the limitations of dependent claim 6, and amended claim 9 to be in independent form including the limitations from independent claim 1. Further, Applicants have amended claims 7 and 12-15, cancelled claims 6 and 10-11 and added claims 16-19. Therefore, claims 1-5, 7-9 and 12-19 are now pending. No new matter has been added.

In the Office Action, the Examiner rejected claims 13-15 under 35 USC §101 as being directed to nonstatutory subject matter. In addition, claims 1-5, 10 and 12 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,944,139 to Campanella in view of U.S. Patent No. 5,881,057 to Komatsu, and claim 11 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Campanella and Komatsu and in further view of U.S. Patent No. 5,937,016 to Choi. These rejections are respectfully traversed. Applicants respectfully request reconsideration of the pending claims in view of the preceding amendments and the following remarks.

### **Claim Objections**

Claims 6 and 9 were objected to for various informalities. Specifically, claim 6 was objected to for claiming “the a first communication channel” and claim 9 was objected to because the phrase “pseudo bit error measurement signal” should be changed to “wireless signals.” Applicants have addressed each of these noted informalities. Accordingly, Applicants respectfully request the Examiner to withdraw the objections.

**Claim Rejections – 35 U.S.C. § 101**

Claims 13 – 15 were rejected under 35 USC §101 as being directed to nonstatutory subject matter. Specifically, the Examiner asserts that “(c)laims 13-15 are directed toward a method of receiving and providing signals, but do not recite a practical application (such as minimizing error) within the body of the claim” (Office Action, page 3). In response, Applicants have amended claim 13 to further define the subject matter being sought, as suggested by the Examiner. Accordingly, Applicants respectfully request that the rejection be withdrawn.

**New Claims**

**Independent Claim 16**

Independent claim 16 is directed to receiver, comprising:

a plurality of convolutional decoders in communication with respective convolutional encoders, said convolutional decoders being configured to receive wireless signals;

a plurality of pseudo bit error circuits in communication with said plurality of convolutional encoders and configured to receive said wireless signals;

a maximum ratio combiner configured to receive output signals from each of said plurality of convolutional decoders and each of said plurality of pseudo bit error circuits; and

a reed-solomon decoder configured to process the output of the maximum ratio combiner.

Applicants respectfully submit that none of the cited references teach or suggest a receiver including all of the limitations of independent claim 16. Specifically, none of the cited references teach or suggest a receiver wherein 1) a plurality of pseudo bit error circuits are in communication with a plurality of convolutional encoders and configured to receive wireless signals; or 2) a maximum ratio combiner is configured to receive output signals from each of the plurality of

convolutional decoders and each of the plurality of pseudo bit error circuits, as required by independent claim 16. For at least this reason, independent claim 16 is patentable over the cited art and in condition for allowance.

#### Independent Claim 18

Independent claim 18 is directed to receiver, comprising:

- a plurality of communication channels configured to receive wireless signals;

- at least one maximum ratio combiner circuit in communication with a forward error correction circuit, the output of which is communicated to a channel decoder select circuit; and

- a plurality of channel decoder circuits in communication with said channel decoder select circuit, wherein at least one of said plurality of channel decoder circuits is configured to provide a pseudo bit error measurement feedback signal to said maximum ratio combiner circuit;

- wherein said at least one maximum ratio combiner circuit and said plurality of channel decoder circuits are configured to receive said wireless signals from each of said plurality of communication channels.

Applicants respectfully submit that none of the cited references teach or suggest a receiver “wherein said at least one maximum ratio combiner circuit and said plurality of channel decoder circuits are configured to receive said wireless signals from each of said plurality of communication channels,” as required by independent claim 18.

For example, Campanella discloses a digital satellite receiver system using satellite direct broadcast and terrestrial repeaters, and including receivers configured for maximum likelihood of combining received signals for purposes of diversity. (Campanella, abstract). Specifically, Campanella teaches a three-arm receiver, wherein a first arm receives and recovers a

signal from a first “early” satellite, and a second arm that receives and recovers a signal from a second “late” satellite. A third arm receives a third, terrestrial re-radiated signal. (Campanella, col. 12, lines 12-32). Referring specifically to Figure 12, two of the arms 301, 302 are provided to the maximum likelihood decision combiner 312. The output of the combiner 312 is communicated to an FEC decoder 250, which is input to a channel decoder select circuit. The third arm 308 is provided to another FEC circuit 250, the output of which is provided to a channel decoder select circuit. In other words, the signals from the third arm are never provided to the maximum likelihood decision combiner 312. Indeed, there is no teaching or suggestion that the maximum likelihood decision combiner and the FEC decoder are configured to receive signals from all three arms 301, 302, 308. Therefore, Campanella cannot possibly teach or suggest a maximum ratio combiner circuit and a plurality of channel decoder circuits that are configured to receive wireless signals from each of the plurality of communication channels, as required by independent claim 18. For at least this reason, independent claim 18 is patentable over the cited art and in condition for allowance.

**CONCLUSION**

Reconsideration and allowance are respectfully requested. In view of the above, each of the presently pending claims in this application is believed to be in condition for allowance. Accordingly, the Examiner is respectfully requested to pass this application to issue.

Applicants believe no fee is due with this response. However, if a fee is due, please charge our Deposit Account No. 18-0013, under Order No. 65899-0688 from which the undersigned is authorized to draw. To the extent necessary, a petition for extension of time under 37 C.F.R. § 1.136 is hereby made, the fee for which should be charged to such deposit account number.

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June 2<sup>nd</sup> landing Saturday.

Respectfully submitted,

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